WHAT IS CLAIMED IS:

1. A method for manufacturing an electron-emitting device, comprising:

a step for forming a polymer film between a pair of electrodes formed on a substrate;

a step for giving conductivity to said polymer film by heating; and

a step for providing potential difference between said pair of electrodes.

2. A method according to claim 1, wherein the step for giving conductivity to said polymer film by heating includes a step for illuminating an electron beam onto at least a part of said polymer film.

3. A method according to claim 1, wherein the step for giving conductivity to said polymer film by heating includes a step for illuminating light onto at least a part of said polymer film.

4. A method according to claim 3, wherein the light is light emitted from a xenon lamp as a light source.

5. A method according to claim 3, wherein the light is light emitted from a halogen lamp as a light source.

6. A method according to claim 3, wherein the light is a laser beam.

7. A method according to claim 1, wherein said polymer film is an aromatic polymer film.

8. A method according to claim 1, wherein the step for forming a polymer film utilizes an ink jet system.

9. A method for manufacturing an electron-emitting device, comprising:

a step for forming a polymer film between a pair of electrodes formed on a substrate;

a step for reducing electrical resistance of said polymer film by heating said polymer film; and

a step for providing potential difference between said pair of electrodes.

10. A method according to claim 9, wherein the step for reducing electrical resistance of said polymer film by heating said polymer film includes a step for illuminating an electron beam onto at least a part of said polymer film.

11. A method according to claim 9, wherein the step for reducing electrical resistance of said polymer

film by heating said polymer film includes a step for illuminating light onto at least a part of said polymer film.

12. A method according to claim 11, wherein the light is light emitted from a xenon lamp as a light source.

13. A method according to claim 11, wherein the light is light emitted from a halogen lamp as a light source.

14. A method according to claim 11, wherein the light is a laser beam.

15. A method according to claim 9, wherein the step for forming a polymer film utilizes an ink jet system.

16. A method for manufacturing an electron-emitting device, comprising:

a step for forming a polymer film between a pair of electrodes formed on a substrate;

a step for illuminating an electron beam onto at least a part of said polymer film; and

a step for providing potential difference between said pair of electrodes.

17. A method according to claim 16, wherein the step for illuminating the electron beam onto said polymer film includes a step for giving conductivity to at least a part of said polymer film.

18. A method according to claim 16, wherein the step for illuminating the electron beam onto said polymer film includes a step for reducing electrical resistance of said polymer film.

19. A method according to claim 16, wherein said polymer film is an aromatic polymer film.

20. A method according to claim 16, wherein the step for forming a polymer film utilizes an ink jet system.

21. A method for manufacturing an electron-emitting device, comprising:

a step for forming a polymer film between a pair of electrodes formed on a substrate;

a step for illuminating light onto at least a part of said polymer film; and

a step for providing potential difference between said pair of electrodes.

22. A method according to claim 21, wherein the

step for illuminating light onto said polymer film includes a step for giving conductivity to at least a part of said polymer film.

23. A method according to claim 21, wherein the step for illuminating light onto said polymer film includes a step for reducing electrical resistance of said polymer film.

24. A method according to claim 23, wherein the light is light emitted from a xenon lamp as a light source.

25. A method according to claim 23, wherein the light is light emitted from a halogen lamp as a light source.

26. A method according to claim 23, wherein the light is a laser beam.

27. A method according to claim 21, wherein said polymer film is an aromatic polymer film.

28. A method according to claim 21, wherein the step for forming a polymer film utilizes an ink jet system.

29. A method for manufacturing an electron source having a plurality of electron-emitting devices, wherein:

said electron-emitting device is manufactured in accordance with any one of methods according to claims 1 to 28.

30. A method for manufacturing an image-forming apparatus having an electron source including a plurality of electron-emitting devices, and an image-forming member for forming an image by illumination of electron emitted from said electron source, wherein:

said electron source is manufactured by a method according to claim 29.